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ABSTRACT

This document reviews research and writings of the 1960s that deal with variables operating within the student teacher/cooperating teacher relationship and affecting the outcome of that relationship for the student teacher. Various methods of matching student teacher and cooperating teacher, cognitive dissonance interpretation, and use of Flander's interaction analysis are all reviewed and discussed. One of the conclusions reached indicates that if the power of the cooperating teacher's influence is derived from the student teacher's very real initiation and security needs as described by cognitive dissonance theory, then clearly the more variables upon which a cooperating teacher/student teacher pair can be matched, the better. However, a concern evident in this literature search must still be considered, that is, whether effective matching is really possible. The indication is that matching may be in itself less important to final student reaching outcomes and gains than efforts to focus the attention of both the cooperating teacher and student teacher on criteria existing outside of their interaction; for this feedback, systems such as interaction analysis offer the best promise. (JA)

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Matching Student Teachers With Cooperating Teachers

A Review of the Literature

Florence Fay Pritchard
March 6, 1974

Findings from doctoral dissertations which are reported in this paper have been necessarily drawn from abstracts of the original documents. It is hoped that those interested in continued examination of the variables involved in matching student teachers with cooperating teachers will refer to the primary sources.

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The student teaching experience is undoubtedly the most important aspect of any program in teacher education. For it is in the field that the prospective teacher can try out at last, a good deal of what has been only theorized up to this point. Further, the student teacher will work with and under the guidance of a cooperating teacher who, ~~has~~ ideally, ^{has} been selected as a master practitioner of teaching. It is through this important relationship that the student teacher will develop skills and techniques in teaching sufficient to warrant certification as a full-fledged member of the profession.

The expectations held by everyone for this student teaching experience are remarkably high. No other profession assigns such a short period of time to an apprenticeship process designed to transform the novice into an initiate. And of greater note, no other profession entrusts this culminating phase of transformation to a single mentor -- as does teacher education by commonly assigning a student teacher to one cooperating teacher.

In the light of the responsibilities given to the cooperating teacher by virtue of his or her central position in the student teaching experience, one might expect a good bit of research into the effects which cooperating teachers have upon their student teachers and vice versa. For it is reasonable to assume that there are variables operating within the student teacher/cooperating teacher relationship which significantly effect the attitudes and behaviors of both participants, and thereby the outcomes of the student teaching experience. Ideally, if such variables can be identified and manipulated, the outcomes of the student teaching experience can be controlled.

A review of the literature reveals that the variables operating within student teacher/cooperating teacher relationship are receiving increasing attention in research studies. Beyond agreeing that such variables exist and ought to be identified,

however, there is a wide range of opinion as to their number, exact nature and relative effect upon student teaching outcomes. Some researchers have focused persuasively on variables associated with the personality structures of cooperating teacher and student teacher, while others have presented convincing cases for the importance of demographic variables. Even grouping the researchers into these two broad categories is somewhat artificial as there is often attention to variables which appear to be both demographic and related to the personality.

The purpose of this paper is to review research and writings of the 1960's which deal with variables operating within the student teacher/cooperating teacher relationship and effecting the outcome of that relationship for the student teacher. The paper will treat first with representative research focused on psychological and demographic variables. An effort will then be made to suggest a synthesis of these two in terms of a third concept which seems implied by both groups of researchers and other investigators as well. Hopefully, such summary and interpretation will serve as an additional stimulus to study and thought which will enrich both pre-service and inservice teaching.

An early look at the student teacher/cooperating teacher relationship as an influence nexus is McAulay's (21) pre-experimental study in 1960, which identifies teaching methods, classroom housekeeping procedures, and relationships with children as areas where student teachers very visibly model their cooperating teachers. McAulay (21) sees the cooperating teacher as strongly influencing student teacher behavior in these areas, and suggests that the degree of influence is a direct function of the formality of the cooperating teacher. The more formal the cooperating teacher, the more the student teacher works to imitate her teaching behavior. More recently, Yee (34) and Jansen (15) also demonstrated that the cooperating teacher is the major source of influence in the student teacher/cooperating teacher dyad. In a test and

retest of attitudes toward young people, given to both cooperating teachers and student teachers, Yee (35) found attitudes of cooperating teachers more stable and significantly less changeable than those of student teachers. The implication here is that the student teacher is more susceptible to change in his attitudes toward the children he teaches, and that the cooperating teacher who is less likely to change his attitudes is in a position to exert significant influence upon the student teacher. Massey (20), too, in a study of 124 student teachers, cooperating teachers, and university supervisors, obtained significant data for the hypothesis that the flow of influence is from the cooperating teacher to the student teacher. And Jansen (15) demonstrated that cooperating teachers can "attract" student teachers away from an identification with the perceived value positions of their university supervisors. In this study of value changes in the three groups during the student teaching period, student teachers changed most in values, moving in the direction of the perceived values of their cooperating teachers and away from the perceived values of their university supervisors.

Accepting then that student teaching does produce change and that the locus of this change is somewhere in the interaction between student teacher and cooperating teacher; a number of researchers have investigated particular factors which may effect the significant influence which the cooperating teacher appears to have. Again, Yee (34) proposes that it is the cooperating teacher's attitude toward young people which will be more clearly transferred to the student teacher. Wiggins (31), in a study of 75 student teachers in 32 agricultural centers found student teachers in what he characterized as medium treatment levels, were significantly influenced to change their teaching behavior in the direction of the expressed attitudes of their cooperating teachers. Each center was identified as a high, medium or low

treatment condition according to its degree of participation in regular Federal Agricultural Association activities. Student teachers in centers identified as medium treatment levels were most influenced by the attitudes of their cooperating teachers, and were observed to change their attitudes so that they came to favor with their cooperating teachers, the teaching of production agriculture or content material, rather than subjects which promote leadership. They also tended to be least influenced toward innovative participation in FAA activities.

Young (35) in a study of the particular attitude, authoritarianism, in elementary school teachers, found a significant trend toward less authoritarianism among student teachers during the pre-service experience. In this study, the student teachers themselves report the cooperating teacher "as one of the three most important presumed causes of such changes."¹

The Conservative/liberal dichotomy implied by the Wiggins (31) and Young (35) studies has been examined by Brim (2) and Wiley (32) with results which while apparently conflicting, again support the idea that cooperating teacher attitudes are absorbed by student teachers regardless of the particular nature of the attitudes. Brim (2) found that student teachers who were conservative in their attitudes toward children became more liberal as cooperating "faculty appeared to be influencing student (teacher) attitudes by attracting them toward their own more liberal position."² Wiley (32), however, in looking at traditionalism and progressivism, found that student teachers tended to move away from identification with more progressive college of education faculty positions, and toward more conservative or traditional positions held by their cooperating teachers. This study especially challenges the worth of the student teaching experience if the goals and objectives of a teacher education program are incompatible with the attitudes of cooperating teachers.

Another group of researchers has examined the specific attitudinal factor, dogmatism, with some rather interesting results. Generally, their work suggests that while the cooperating teacher probably exerts more influence within the student teacher/cooperating teacher dyad, the student teacher himself is not to be discounted as a source of power within the relationship. Johnson (16), for instance, used the Rokeach Dogmatism Scale (Form E) to assign pre and post-test dogmatism scores to cooperating teachers and student teachers before and after student teaching. Overall, he found a significant movement of student teachers dogmatism scores toward congruence with the scores of their cooperating teachers. Of particular interest, however, were his findings that the initial degree of dogmatism on the part of student teachers seemed to be related to the amount of influence the cooperating teacher was able to exert. Student teachers with lower dogmatism scores initially shifted strongly toward the dogmatism positions of their cooperating teachers. Student teachers who had high dogmatism scores initially tended to diverge from the positions of their cooperating teachers to some degree, even though their overall degree of change was smaller. Brumbaugh (3) also used the Rokeach scale in a study of possible relationships between dogmatism and specific discipline areas. The more close-minded student teachers in his sample of 40 student teacher/cooperating teacher pairs identified with mathematics, science and social studies. English, foreign languages and fine arts, on the other hand, were the areas with which the more open-minded student teachers identified. Brumbaugh expresses his concern that dogmatism, as the antithesis of creativity must be further investigated. ". . . What impact," he asks, "Does a close-minded science teacher have upon the development of creative student thinking in science?"³ And by implication, can close-minded student teachers in math, science or social studies, be influenced to become more creative through interaction with cooperating teachers, or will such interaction merely harden the existing mold?

The verbal behavior patterning of cooperating teachers and student teachers has been investigated by a number of researchers. Among this group, two are representative. Flint (10) finds that student teachers significantly imitate their cooperating teachers in questioning behavior related to both simple and complex problems, and pre-framed and affective-imaginative problems. Mitchell (24) finds a significant relationship between the verbal behavior of student teachers and cooperating teachers as measured by Flanders (9) Interaction Analysis profiles. Student teachers assumed verbal styles consonant with the verbal styles of their cooperating teachers. This occurred whether the mode of the cooperating teacher was one of greater teacher-talk or greater pupil-talk.

Studies of personality type as a source of influence have produced results which while not conclusive are definitely suggestive of areas for further fruitful investigation. Hill (13) classified each member of a sample of 40 student teachers and 40 cooperating teachers using Heil profiles, as either B, self-controlling, or C, fearful. He then observed the effects of all possible matches on student teacher performance. Using the Classroom Observation Record, or Ryans Scale as a measure of student teaching performance, he found no statistically significant result for any of the match conditions. He did find, however, that scale means were highest where student teacher and cooperating teacher were matched for similar profiles, and lowest where their profiles were divergent. The highest means of all in the sample were found where student teacher and cooperating teacher both had B or self-controlling profiles.

Gewinner (12) also matched student teachers and cooperating teachers according to personality factors, choosing 16 factors from the Minnesota Teacher Attitude Inventory. He studied the effects of these matches on student teacher attitudes toward teaching and found that student teachers paired with cooperating teachers who were of average similarity to them in attitude, showed a significant change toward

more negative attitudes toward teaching. Davis (7) used four indices of the Meyer Briggs Type Inventory to study personality factors operating in a random sample of 107 student teacher/cooperating teacher dyads. He found that three: Sensing-Intuition, Thinking-Feeling, and Judgement-Perception; were significant indicators for student teaching success. The greater the discrepancy between the scales of pair mates, the more negatively did student teachers view the competencies of their cooperating teachers. Davis (7) is convinced that such negative views will produce conflict within the student teacher/cooperating teacher dyad. This, she believes, will not lead to a productive student teaching experience. She suggests the use of Thinking-Feeling Index discrepancy score as "a criterion for student teacher assignment . . . [and] . . . a feasible means of attempting to avoid conflict and of increasing the probability of student teacher growth toward maximum potential."⁴

Among researchers who have investigated variables which are at least in part demographic, Fuhrmann (11) and Leslie (19) are noteworthy. Fuhrmann (11) studied the effects of cooperating teachers on the attitudes of a group of interns toward teaching and especially toward inner-city pupils. These interns were not typical teacher education candidates, but rather, were engaging in teacher-internship after having successfully identified with other vocations. As the study progressed, Negro subjects emerged as members of a population significantly different from the original group. This allowed for the gathering of some data on the effects of the demographic variable of race. Fuhrmann's (11) findings were that for both white and Negro subjects, those with no degrees and no experience in teaching were the most susceptible to the influence of their cooperating teachers and to changes in attitude toward inner-city pupils. Among Negro subjects as a separate group, those with degrees but no previous experience were most susceptible to influence and change, and those with both degrees and previous experience were most resistant. Age was demonstrated in this study to have no significant effect.

Among the most ambitious studies of student teacher/cooperating teacher matching is Leslie's (19) investigation in 1969. This researcher set himself the task of examining both the more subjective factors of personality in general (as extended to include such concepts as liberalism/conservatism, dogmatism/creativity, etc.), and such demographic and more objective factors as socio/economic status, sex, religious preference, age, and physical proximity. Addressing himself in summary of research to date, to the same basic questions: Leslie (19) asks, Does matching of student teachers and cooperating teachers improve student teaching performance? -- What are the variables which effect such matches? -- Does the student teacher who is matched gain a superior attitude toward teaching? -- Does he sense a greater gain from his experience? Dividing a student teaching sample of 90 University of Utah seniors into groups, and using a pool of over 1000 public school classroom teachers, Leslie (19) created five conditions of student teacher/cooperating teacher matches. Groups I and II were controls, the first consisting of student teachers assigned at random to cooperating teachers by cooperating school districts, without input from the University, and the second consisting of student teachers randomly assigned to cooperating teachers which had been identified by the University as strong teachers. Group III consisted of pairs matched on personality factors, and Group IV of pairs matched on demographic factors and Group V, a combination of matches on both personality and demographic factors.

Overall, student teachers in match pairs did not evidence better student teaching performance as measured by supervisor and cooperating teacher evaluations. Additionally, attitudes toward the general teaching experience were not significantly improved, and Leslie (19) frankly concluded that matching on composites as carried out in this study cannot be honestly recommended in the light of the tremendous effort involved and the minimal results obtained. He does, however, call attention

to two areas of significance in his data analysis. First, "within group comparisons clearly suggest that student teacher/cooperating teacher compatibility does lead to superior performance and attitudes on the part of student teachers. The basis of this statement is the most consistent pattern demonstrated by the data of this study. The ever-present findings were that student teachers who had at the outset classified their cooperating teachers above the median in terms of functioning as a cooperating teacher performed better on nearly all variables . . ."⁵. And second, "We can conclude that the investigations of this study revealed one promising basis for matching -- matching on demographic variables . . . student teachers matched on personality variables consistently performed in an inferior manner when compared with students who were matched on demographic variables, or who were not matched at all."⁶

Thus, it would seem that the work of Leslie (19), again affirms that the student teacher/cooperating teacher relationship is the nexus of significant influence. ^{However} There simply is not agreement among the researchers to the particular variables which are operating to cause observable change in the attitudes and behaviors of the participants. The evidence of the importance of factors related to personality is persuasive, but there is also evidence that demographic factors can in no way be discounted.

A key to the possible resolution of this contradiction appears in the closing statement of Leslie's (19) report. Without any real elaboration, he hints that student teaching performance may be explainable in terms of cognitive dissonance. Perhaps, he suggests, student teachers who find themselves with cooperating teachers whom they view as ineffectual, are thrown into a state of disequilibrium. In an effort to resolve this, and to obtain the direction they feel they need and are not receiving, they, in effect, teach themselves to become teachers, and in the final analysis learn more than they might have if matched with cooperating teachers

whom they viewed as more effective. Leslie (19) even goes on to suggest that it may be worthwhile to match student teachers with cooperating teachers who have personalities quite different from their own, and thus by implication, produce this better-by-opposite effect.

Pursuing this suggestion of Leslie's (19), that student teaching behavior and attitude change is related to cognitive dissonance, and looking at both the literature reviewed thus far, as well as a number of additional studies, in the context of this theory is extremely interesting. For it appears distinctly possible that the theory of cognitive dissonance as developed by Leon Festinger (8) can contribute a great deal to an understanding of what is actually going on in the student teacher/cooperating teacher dyad. Further, if this relationship is explainable in terms of the theory, there are some rather clear indications as to the kind of control factors which ought to be introduced into the relationship so that it will be most productive.

Briefly, cognitive dissonance theory describes human beings as continually placed in a state of mental and emotional disequilibrium as a result of contacts with the real world. Each mind contains a map of reality, and this map consists of a multiplicity of cognitive elements or perceptions about the world. (It should be noted that these cognitive elements are generated by attitudes and values as well as by phenomenological reality). Generally, the individual prefers some measure of agreement among these elements, but continuing new experiences and the necessity for decision making causes continuing inconsistency or dissonance between elements. As this occurs, the individual brings into play, mental processes which work to reduce dissonance and bring inconsistent elements into consonance. While such efforts are continual, they are not always successful, and the individual will necessarily develop some tolerance for dissonance. This tolerance level will vary with individuals, but generally the greater the dissonance, the more determined will be the efforts to achieve consonance. There are three strategies available for bringing

dissonant elements into consonance. The individual may change his perception of the environment by adding new information about it. This will alter cognitive elements he receives and may bring them into consonance with other elements. Or, the individual may change his own behavior, thus altering cognitive elements he constructs within from himself. Or, the individual may discount and minimize the conflict between existing dissonant elements so that the entire issue is reduced in importance and the degree of dissonance thus reduced. The strategy selected will be the one which is most productive for the individual in a given situation.

Of particular importance for application to student teacher/cooperating teacher relationships, is that aspect of the theory dealing with decision making. The very act of making a decision produces dissonance. Given two sets of cognitive elements which comprise the alternatives in a decision, the individual must choose one set or the other. Once he chooses, he brings the elements of the chosen alternative into consonance, but is left with the task of somehow bringing also into consonance the elements of the unchosen alternative. And these elements are necessarily dissonant because they are unchosen. Typical moves which are variations of three basic strategies include enhancing the elements of the chosen alternative, gaining the approval of others regarding one's choice on the one hand, while changing the view of the unchosen alternative so that it becomes less desirable and less attractive.

A specific application of this theory to the student teaching situation yields the following possibilities: The student teacher who is beginning his pre-service experience is beginning the implementation of a major life decision -- to become a teacher. Since this is such an important decision and has involved alternatives consisting of many cognitive elements, he has much dissonance to be resolved: in simplest terms, he has a strong need to prove that he has made the right decision. Further, because he is young, in new territory, low in status, and aware that the award of certification is vital, his tolerance for dissonance will probably be already

strained. One important way in which he can reinforce his decision and thus diminish the attractiveness of other career choices he might have made is to teach acceptably or well in the eyes of others whom he believes are appropriate judges of teaching. The most important "significant other" in this case is, of course, the cooperating teacher. If he can teach in ways which the cooperating teacher will evaluate as good, then his decision is reinforced, the appeal of other vocational choices recedes and dissonance will be either dissipated or reduced to a tolerable level. To accomplish this, the student teacher identifies those teaching behaviors which will be judged "good" by the cooperating teacher by observing the behaviors which the cooperating teacher visibly employs and imitating them.

Support for this interpretation of the dynamics of the student teacher/cooperating teacher influence transfer can be found in a number of studies. McAulay (21) for instance, can be reinterpreted to suggest that the more formal cooperating teachers were more thoroughly modeled by the student teachers because formality is a visible trait. The less structured cooperating teacher in the study was probably far less specific in behavior, and thus less imitable than the cooperating teacher who had a place for everything and everything in its place. McAulay (21) notes that such imitation seemed to give the student teacher a sense of "security and initiation."⁷ -- or re-stated, support and thus reduced dissonance through a sense of belonging.

Burton's (4) work also lends credence to the cognitive dissonance interpretation. Looking at group alerting, class participation, accountability and reinforcement behaviors exhibited by cooperating teacher, he found that the more visible such behaviors were, the more student teachers classified them as appropriate to the role of the teacher and tried to imitate them. Roberts (28), looking at the perceptions which science student teachers held about the control ideologies of their cooperating teachers, suggests that student teachers felt threatened by the differences between their own pupil control ideologies and those which they perceived their cooperating teachers to have. As a group, these student teachers tended to become more controlling

of pupils. Again, it can be assumed that cooperating teacher behavior which was more controlling of pupils was more visible to student teachers and thus modeled as behavior which the cooperating teachers would approve. Interestingly here is an effect of double dissonance. The student teacher first attempts to resolve the immediate dissonance between his own and his cooperating teacher's pupil control ideologies by changing his own behavior to become consonant with the behavior of the cooperating teacher. Such consonance theoretically produces cooperating teacher approval which reinforces the original decision to student teach and thus lowers the decision-produced dissonance with which the student teachers began the pre-service experience. Now, however, the student teachers have another source of dissonance. The newly assumed outward behavior is probably not consonant with inner attitudes regarding pupil control. Each must behave as a "strict" teacher even though his inner philosophy inclines him to be more liberal. Cooperating teacher/student teacher match situations which produce this much dissonance are surely questionable. As Roberts (28) himself suggests this particular kind of incongruence between student teacher and cooperating teacher ideologies may very well have significantly deleterious effects on the ability of the student teacher to develop inquiry teaching skills.

Further evidence that student teachers tend to move toward compliance with expressed attitudes of cooperating teachers is noted by Lamb (18) who sees a trend toward lowered independence and increased subdued behavior among student teachers during the pre-service period. Poretta (27) and Monahan (25) also looked at student teacher compliance with cooperating teacher attitudes and found a significant relationship between positive final evaluations and congruence of student teacher/cooperating teacher attitudes toward education. In effect, the cooperating teacher seemed to be basing ultimate approval of the student teachers' efforts on the willingness of the student teacher to imitate or comply with cooperating teacher attitudes.

That student teachers themselves are aware of the cooperating teacher as the essential power in the student teacher/cooperating teacher relationship, was demonstrated by McEwin (22) who compared student teacher attitude changes after methods courses and after the field experience. Student teaching experiences in the field had

far greater effect on attitude changes, and student teacher ranked the personality of the cooperating teacher as the single most important cause. This factor ranked first in seventy which student teachers were asked to consider. And in a survey of 163 student teachers representing assignment to cooperating teachers across the country, Sorenson (30) found that the student teacher is quite convinced of the necessity for conforming effectively to the perceived constellation of behaviors which the cooperating teacher exhibits. When asked to state what advice they would give to a friend to help insure a successful student teaching experience, seventy-four percent of the student teachers mentioned first an expressed concern with getting to know and imitate the attitudes, habits and ideas of the cooperating teacher. Sorenson (30) states that the "lore of grade getting"⁸ is a controlling factor in the student teacher experience.

Examined in the light of dissonance theory this forcing of student teachers to comply with both behavior and attitudes of cooperating teachers has extremely serious implications. Ultimately, such forced compliance may make autonomous and innovative behavior virtually impossible for the student teacher and the certified teacher he becomes. Further, the fact that he himself has been educated by techniques of forced compliance may cause the student teacher/cum beginning teacher to construct the teaching model he eventually uses with students along the same lines.

To clarify, a review of the dissonance producing effects of forced compliance is in order. When the student teacher imitates the attitudes and behaviors of his cooperating teacher so that the final evaluation will be good and certification awarded, he is very likely going against some or many of his own private beliefs. His outer behavior is then dissonant with his inner convictions. Since he must maintain the outer behavior, his only real chance to reduce this new dissonance (which is only added to the original dissonance produced by the desire to obtain support

for his decision to become a teacher at all? is to change his inner or private beliefs. It is then to his own advantage to reduce his turmoils by brainwashing himself, in effect, bringing his private convictions into line with the outer behavior which is forced upon him as the price of a good evaluation. That a student teacher might be strong enough to resist such change of his inner convictions, might complete his student teaching all the while supporting himself in a state of unresolved dissonance seems unlikely for all but the most autonomous of persons. It is seriously questionable how much of this sort of strength of self is possible for most pre-service novices.

The further possibility that the newly certified teacher may view forced compliance strategies as the effective teaching model are once again a cause for real concern. If the newly certified teacher looks back on his own pre-service experience as a process whereby he was gradually brought under the control of the cooperating teacher, then clearly, bringing students under control in general, will appear to be the appropriate teaching model. In the long run, teacher directed, uncreative and non-divergent methodology will be perpetuated.

What are the implications for matching attempts if it is true that cognitive dissonance as a result of the original decision to teach and the need to comply with cooperating teacher behavior and attitudes in order to obtain a credential is operating so powerfully to effect student teaching outcomes? At the simplest level, matching is important on both psychological or demographic variables. For if student teachers and cooperating teachers can be matched in terms of similar cognitive "maps" of reality in as many ways as possible, general dissonance resulting from the perceptions each has of the other will be reduced. If student teacher and cooperating teacher are similar in the ways in which they think and feel, in the ways in which they perceive and behave, and in the ways in which they have been socialized, the student teacher will be in effect doing what he wishes to do as he imitates the behavior of a cooperating

teacher which is essentially very much like his own, finds support for his decision to teach and his inner beliefs, and thus reduces what dissonance he has. This was in effect Leslie's (19) conclusion.

But as Leslie (19) goes on and questions, is it feasible to make the enormous effort in finding such matches? How successful are teacher educators likely to be in coming up with perfect pairs time and time again? Is it possible to find an alternative method of reducing student teacher dissonance so that instead of becoming an indiscriminate mirror of the cooperating teacher, the student teacher can become instead a creative and autonomous self who can in turn help students to become individually creative?

In a search for such an alternative, it may be well to work from an understanding of the nature of the original situation. If it is the student teacher's attempts to reduce dissonance which motivates him to use the cooperating teacher as a model for change in his own attitude and behavior, it would seem advisable to work toward making the cooperating teacher a model which when imitated by the student teacher will allow for and even promote creativity, student directed learning styles and divergent thinking.

There is a broad current of promising research which suggests that in the techniques of Interaction Analysis as originally developed by Flanders (9) and Amidon (1) for the study of teacher/pupil relationships, teacher educators have had at hand for some time (actually since the mid fifties) a set of strategies ideally suited to improvement of the cooperating teacher as a model. Further, by making this set of strategies available to the student teacher two important benefits accrue. First, the student teacher has available a set of dissonance reducers which have been demonstrated conclusively (see Chapter 12, Flanders (9)) to improve pupil outcomes and attitudes. Second, because these strategies are independent of the cooperating teacher, the student teacher can employ them to reduce dissonance without coming under the undue influence of the cooperating teacher.

The use of interaction analysis and similar feedback systems to interrupt direct modeling of the cooperating teacher by the student teacher, or in other words, to provide a source of valid dissonance reducers other than the behavior and attitudes of the cooperating teacher, is relatively recent. Clayton (5), concerned with the process by which "cooperating teachers tend to shape student teachers' instructional behavior in their own mold,"⁹ trained cooperating teacher in Flanders (9) and other feedback systems with the result that student teachers were able to demonstrate a greater congruence between their own stated instructional intentions and their own classroom behavior. McLeod (23) found that by using Flanders' (9) training, science student teachers could be helped on the one hand to use verbal patterns which were more pupil directed and less teacher directed, and to be less influenced to imitate the interaction patterns of cooperating teachers, on the other. Ishler (14) hypothesized that cooperating teachers generally use teacher centered verbal patterns and would by virtue of their influence over student teachers encourage them in the development of similar patterns. He used the student teaching supervisor to give feedback to student teachers on the kinds of verbal patterns they were using. His final results indicated that student teachers receiving such feedback evidenced slightly more learner-centered verbal behavior than did student teachers receiving no feedback. Zahn (36) found that student teacher training in interaction analysis helped to support the effects of positive cooperating teaching in terms of positive attitudes toward teaching and to negate or reduce the effects of negative cooperative teaching attitudes. Joyce (17) using a wide array of feedback systems including interaction analysis found feedback training for cooperating teachers a method of helping them "to recognize their own effects and to modulate them in behalf of student teachers."¹⁰ Collins (6) found that general anxiety for student teachers could be reduced through the use of positive reinforcement feedback. When cooperating teachers in his sample were told that the conferencing about instructional matters and

productivity which they were giving to their student teachers was satisfying to them, the cooperating teacher modified their conferencing behavior even further and provided increased satisfaction to the student teachers. This study suggests again that the behavior of the cooperating teacher can be shaped so that it will become a more educationally valid dissonance reducer.

Several researchers have demonstrated the significant effects of common feedback training for both student teacher and cooperating teacher. Amidon (1) in extending his original work with Flanders (9) to the field of teacher education, found that common training of both student teacher and cooperating teacher in interaction analysis produced student teachers who used significantly less teacher-directed talk. Perhaps most notable are the findings of Simon (29) and Moskowitz (26), that common training in interaction analysis not only promoted more indirect teaching patterns in both student teacher and cooperating teacher, but also resulted in both student teacher and cooperating teacher developing a greater individuality in teaching style as each became able to employ a wider variety of behavior patterns within a more pupil-centered framework.

In the final analysis, the research may not be conclusive, but it is indicative. There is no question that the cooperating teacher exerts tremendous influence over the attitudes and behavior of the student teacher. The role of matching in assuring that this influence is positive and leads in the end toward student teacher acquisition of skills in open and creative, pupil-centered teaching needs further investigation. If the power of the cooperating teacher's influence is derived from the student teacher's very real initiation and security needs as described by cognitive dissonance theory, then clearly the more variables upon which a cooperating teacher/student teacher pair can be matched, the better. Leslie's (19) concern remains the same, however: is effective matching really possible? The indications are that matching may be in itself less important to final student teaching outcomes, and in the long run, too, gain for pupils, than efforts to focus the attention of both cooperating teacher and student teacher on criteria existing outside of their interaction. For this purpose, feedback systems such as interaction analysis offer the most promise.

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